

**CLAIMS**

Having thus described our invention, what we claim as new and desire to secure by Letters Patent is as follows:

- 1           1. A device for producing synthetic fiber materials, with a polymer  
2 melt feed leading to a rotating hollow reactor, whose wall can be heated and  
3 which widens conically in order to guide a film melt toward an open side that  
4 can be closed with a lid, and with ribs for dividing the melt film into fibers  
5 that grow rigid after leaving the hollow reactor, wherein the hollow reactor is  
6 vertically oriented and exhibits on its curved upper side an opening for  
7 introducing the polymer melt, while a rotating distributor plate is positioned  
8 opposite the opening, at a slight distance from the inner wall of the hollow  
9 reactor.
- 1           2. A device according to claim 1, wherein the distance between the  
2 distributor plate and the inner wall of the hollow reactor can be adjusted.
- 1           3. A device according to claim 1, wherein the distributor plate exhibits  
2 a surface that faces the opening and that rises toward the rim.
- 1           4. A device according to claim 3, wherein the distributor plate exhibits  
2 an upper side that curves in concave fashion and faces the opening.
- 1           5. A device according to claim 1, wherein a truncated cone whose outer  
2 diameter is smaller than the diameter of the distributor plate is positioned on  
3 said distributor plate.

1           6. A device according to claim 5, wherein the diameter of the truncated  
2 cone is on the same order of magnitude as the diameter of the opening of the  
3 feed.

1           7. A device according to claim 1, wherein the inner wall of the hollow  
2 reactor is parabolic in shape.

1           8. A device according to claim 1, wherein the ribs on the inner wall of  
2 the hollow reactor run vertical to the rim in the lower area.

1           9. A device according to claim 1, wherein the hollow reactor, together  
2 with a surrounding container, forms a curved gap, to which a steam feed and a  
3 steam outlet are attached.

1           10. A device according to claim 9, wherein the steam feed and the  
2 steam outlet are positioned on the upper and lower rim of the hollow reactor.

1           11. A device according to claim 9, wherein the steam is guided through  
2 the gap in circulating fashion.

1           12. A device according to claim 11, wherein the steam is conducted  
2 through the curved gap in the same direction as the melt flowing as a film on  
3 the inner wall of the hollow reactor.

T09T19022660